

16c) are superposed in the heated state, in that pressure is exerted on the superposed strips (16a, 16b, 16c) in order to achieve the adhesion of the laminated strips (16a, 16b, 16c), in order to obtain a laminated composite strip (17), and in that an operation involving mechanical stresses, such as a cutting operation, is carried out on the composite laminated strip (17).

- 10 11. The process as claimed in claim 9, characterized in that the reactive adhesive coating consists of one of the following polymer materials: acrylic material, polyester, epoxy resin, phenolic epoxy resin, polyester/epoxy resin, phenolic resin with modifier, polyurethane/polyester resin.
- 15 12. The process as claimed in either of claims 10 and 11, characterized in that the reactive adhesive polymer material is deposited on at least one side of the thin metal strip (1) by one of the following processes: coating, spraying, dipping.
- 20 13. The process as claimed in any one of claims 1 to 11, characterized in that thin brittle metal strip (1) is a strip made of a soft magnetic alloy having a nanocrystalline structure, that is to say containing at least 50 vol % of fine crystals having a size of less than 100 nm, obtained by casting the soft magnetic material in the form of an amorphous strip and by heat treatment of the amorphous strip, the thin metal strip (1) being covered, in one of its amorphous or nanocrystalline states, on at least one side with a coating layer comprising at least one polymer film.
- 30 14. The process as claimed in claim 13, characterized in that the coating layer comprising a polymer
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material has a thickness of between 1 and 50  $\mu\text{m}$ .

15. The process as claimed in either of claims 13 and 14, characterized in that the thin strip of nanocrystalline material has a thickness of around 20  $\mu\text{m}$ .

16. The process as claimed in any one of claims 13, 14 and 15, characterized in that the soft magnetic material contains iron, copper, niobium, silicon and boron, or iron, zirconium, boron and possibly copper and silicon.

17. The process as claimed in claim 16, characterized in that the atomic composition of the soft magnetic alloy is, for example, of the Fe-Cu-Nb-B-Si type or of the Fe-Zr-(Cu)-B-(Si) type or of another type.

18. The process as claimed in any one of claims 13 to 17, characterized in that the strip of soft magnetic material is covered in the amorphous state with a complex mixture consisting of solvents, polymer binders, aluminates, silicates and fluxes, in that the strip covered with the coating layer is dried, in that a plurality of coated and dried amorphous strips are produced, in that the plurality of coated amorphous strips are superposed, in that the coated amorphous strips undergo a first curing operation, in order to obtain an amorphous/polymer composite laminated strip, in that components are cut from the composite strip, in that the cut components are heat treated at a temperature allowing a nanocrystalline structure to develop in the amorphous strips and allowing the aluminate/silicate/flux mixture to vitrify, in order to obtain cut shaped components comprising

laminated nanocrystalline layers and vitrified layers.

19. The process as claimed in claim 18, characterized in that a resin of the ethylcellulose type, solvents consisting of a mixture of aliphatic or aromatic hydrocarbons, a mineral filler consisting of glasses or oxides, and an organic filler consisting of organometallic or surfactant substances are used in the mixture for covering the strip (1).

20. The process as claimed in any one of claims 1 to 19, characterized in that that step in which the thin strip (1) is subjected to stresses is a mechanical cutting operation.

21. The process as claimed in any one of claims 1 to 19, employing a step of chemically cutting a thin metal strip (30) coated on one of its sides with a coating layer (31) made of polymer material.

22. The process as claimed in claim 1 for the production of a component (44) of a printed circuit, comprising at least one winding (42, 43), such as a transformer (44), characterized in that:

- a laminated strip (36) consisting of a strip (36a) made of nanocrystalline alloy and of a film of polymer material (36b) adhering to one of the sides of the strip of nanocrystalline alloy is produced;
- the strip made of nanocrystalline alloy is cut in order to obtain a plurality of magnetic circuits (37) made of nanocrystalline alloy each adhering to one section of the film of polymer material (36b);
- a plurality of sections are cut from the film of polymer material;